

Listing of Claims

1. (Currently Amended) A method of increasing an immune response to an opportunistic infection in an immunocompromised subject, comprising selecting an immunocompromised subject; administering to the immunocompromised subject a therapeutically effective amount of an immunostimulatory D oligodeoxynucleotide prior to or after exposure of the immunocompromised subject to a secondary ~~opportunisitie~~ infection, wherein the D oligodeoxynucleotide is at least 18 nucleotides to about 30 in length and comprises a sequence represented by the following formula:

5' X₁X₂X₃ Pu₁ Py₂ CpG Pu₃ Py₄ X₄X₅X₆(W)_M(G)_N-3' (SEQ ID NO : 22)

wherein the central CpG motif is unmethylated, Pu is a purine nucleotide, Py is a pyrimidine nucleotide, X and W are any nucleotide, M is any integer from 0 to 10, and N is any integer from 4 to 10; and

evaluating the immune response to the ~~opportunistic~~ secondary infection;
thereby increasing the response to the secondary ~~opportunistic~~ infection in the immunocompromised subject.

2. (Currently Amended) The method of claim 1, wherein the subject is immunocompromised as a result of an infection with ~~a lentivirus~~ human immunodeficiency virus (HIV) or a simian immunodeficiency virus.

3. (Canceled).

4. (Currently Amended)) The method of claim 2, wherein the ~~lentivirus~~ human immunodeficiency virus is HIV-1.

5. (Currently Amended) The method of claim 2, wherein the human immunodeficiency virus~~lentivirus~~ is HIV-2.

6. (Original) The method of claim 1, wherein the subject has acquired immune deficiency syndrome (AIDS).

7. (Canceled).

8. (Currently Amended) The method of claim [[7]] 1, wherein N is 6.

9. (Currently Amended) The method of claim [[7]] 1, wherein Pu₁ Py₂ CpG Pu₃ Py₄ comprises phosphodiester bases.

10. (Currently Amended) The method of claim [[7]] 1, wherein Pu₁Py₂CpGPu₃ Py₄ are phosphodiester bases.

11. (Currently Amended) The method of claim [[7]] 1, wherein X₁X₂X₃ and X₄X₅X₆(W)_M(G)_N comprise phosphodiester bases.

12. (Currently Amended) The method of claim [[7]] 1, wherein X₁X₂X₃ comprises one or more phosphothioate bases.

13. (Currently Amended) The method of claim [[7]] 1, wherein X₄X₅X₆(W)_M(G)_N comprises one or more phosphothioate bases.

14. (Currently Amended) The method of claim [[7]] 1, wherein X₁X₂X₃ Pu₁Py₂ and Pu₃ Py₄ X₄X₅X₆ are self complementary.

15. (Currently Amended) The method of claim [[7]] 1, wherein the secondary opportunistic infection is a bacterial infection, a fungal infection, a viral infection, a protozoan infection, a prion disease, or a neoplasm.

16. (Currently Amended) The method of claim [[7]] 1, wherein the secondary opportunistic infection is infection with *Leishmania*.

17. (Currently Amended) The method of claim [[7]] 1, wherein the secondary opportunistic infection is salmonellosis, syphilis, neurosyphilis, tuberculosis, atypical mycobacterial infection, bacillary angiomatosis, aspergillosis, candidiasis, coccidioidomycosis, cryptococcal meningitis, hepatitis B, histoplasmosis, cryptosporidiosis, isosporiasis, microsporidiosis, *Pneumocystis Carinii* pneumonia, toxoplasmosis, *Cytomegalovirus*, hepatitis, herpes simplex, herpes zoster, human papiloma virus, *Molluscum Contagiosum*, oral hairy leukoplakia, progressive multifocal leukoencephalopathy, Kaposi's sarcoma, systemic non-Hodgkin's lymphoma, or primary CNS lymphoma.

18. (Currently Amended) The method of claim [[2]] 4, further comprising administering to the subject a combination of drugs which comprises a highly active anti-retroviral therapy (HAART).

19. (Original) The method of claim 2, further comprising administering an anti-retroviral drug.

20. (Currently Amended) The method of claim 19, wherein the anti-retroviral ~~retroviral~~ drug comprises 3'-azido-3'dexoy-thymidine (AZT).

21. (Original) The method of claim 1, wherein the oligodeoxynucleotide comprises a sequence selected from the group consisting of SEQ ID NO: 1, SEQ ID NO: 2, SEQ ID NO: 3, SEQ ID NO: 4, SEQ ID NO: 5, SEQ ID NO: 6, SEQ ID NO: 7, SEQ ID NO: 8, SEQ ID NO: 9,

SEQ ID NO: 10, SEQ ID NO: 11, SEQ ID NO: 12, SEQ ID NO: 13, SEQ ID NO: 14, SEQ ID NO: 15, and SEQ ID NO: 16.

22. (Original) The method of claim 1, wherein the oligodeoxynucleotide is a K oligonucleotide that comprises a sequence represented by the formula:

5'-N₁N₂N₃T-CpG-WN₄N₅N₆-3' (SEQ ID NO: 20)

wherein the central CpG motif is unmethylated, W is A or T, and N₁, N₂, N₃, N₄, N₅, and N₆ are any nucleotides.

23. (Canceled).

24. (Canceled).

25. (Previously Presented) A method of increasing an immune response to an opportunistic infection with a pathogen in an immunocompromised subject, comprising selecting an immunocompromised subject; and administering to the subject a therapeutically effective amount of an immunostimulatory D oligodeoxynucleotide,

wherein an antigenic epitope of a polypeptide from the pathogen is not administered to the subject,

thereby increasing the response to the opportunistic infection.

26. (Previously Presented) The method of claim 7, wherein the oligodeoxynucleotide has the nucleic acid sequence set forth as 5'XXTGCATCGATGCAGGGGG 3' (SEQ ID NO: 1), wherein X is a G.

27. (Currently Amended) The method of claim 1, wherein the oligodeoxynucleotide has consists of the nucleic acid sequence set forth as SEQ ID NO: 177.

28. (Previously Presented) The method of claim 25, wherein the pathogen is Listeria.
29. (New) The method of claim 25, wherein the D oligodeoxynucleotide consists of the nucleotide sequence set forth as SEQ ID NO: 177.
30. (New) The method of claim 1, wherein the subject is immunocompromised as a result of chronic granulomatous disease.
31. (New) The method of claim 2, wherein the D oligodeoxynucleotide consists of the nucleotide sequence set forth as SEQ ID NO: 177.
32. (New) The method of claim 31, wherein the subject is immunocompromised as a result of an infection with a human immunodeficiency virus.